UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,566	10/25/2000	Richard H. Boivie	YOR920000591US1	2909

23334 7590 07/03/2007

FLEIT, KAIN, GIBBONS, GUTMAN, BONGINI
& BIANCO P.L.
ONE BOCA COMMERCE CENTER
551 NORTHWEST 77TH STREET, SUITE 111
BOCA RATON, FL 33487

EXAMINER	
TRAN, PHILIP B	
ART UNIT	PAPER NUMBER
2155	

MAIL DATE	DELIVERY MODE
07/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/696,566
Filing Date: October 25, 2000
Appellant(s): BOIVIE, RICHARD H.

Jose Gutman
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/26/2007 appealing from the Office action mailed 8/22/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. Pat. No. 6,331,983	**Haggerty et al**	**12-2001**
U.S. Pat. No. 6,643,773	**Hardjono**	**11-2003**
U.S. Pat. No. 5,331,637	**Francis et al**	**07-1994**

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 8-20 of the instant application is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over some claims of copending U.S. Patent Application No. 09/696,116 in view of Francis et al (Hereafter, Francis), U.S. Pat. No. 5,331,637. Although the conflicting claims are not identical, they are not patentably distinct from each other because modifications are obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding claim 8, claim 10 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 8 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 2]. It does not explicitly teach the multicast packet includes a packet header comprising a plurality of destination network addresses wherein at least one of the plurality of destination network addresses is a unicast address and wherein the packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of destination network addresses wherein at least one of the plurality of destination

network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process.

Regarding claim 9, claim 9 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 9 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 2].

Regarding claim 10, claim 10 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 10 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 2].

Regarding claim 11, claim 11 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 11 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 3].

Regarding claim 12, claim 12 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 12 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 3].

Regarding claim 13, claim 15 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 13 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 3]. It does not explicitly teach the multicast packet includes a packet header comprising a plurality of destination network addresses wherein at least one of the plurality of destination network addresses is a unicast address and wherein the packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of destination network addresses wherein at least one of the plurality of destination network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process.

Regarding claim 14, claim 15 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 14 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 3].

Regarding claim 15, claim 15 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 15 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 3].

Regarding claim 16, claim 16 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 16 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 4].

Regarding claim 17, claim 19 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 17 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 4]. It does not explicitly teach the multicast packet includes a packet header comprising a plurality of destination network addresses wherein at least one of the plurality of destination network addresses is a unicast address and wherein the packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of destination network addresses wherein at least one of the plurality of destination

network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process [see Imai, Col. 15, Lines 30-38].

Regarding claim 18, claim 19 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 18 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 4].

Regarding claim 19, claim 19 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 19 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 4].

Regarding claim 20, claim 20 of copending U.S. Pat. Application No. 09/696,116 recites all limitations in claim 20 [see Amendment of U.S. Pat. Application No. 09/696,116 filed 12/31/2005, Page No. 4].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 6, 8, 10, 13-15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haggerty et al (Hereafter, Haggerty), U.S. Pat. No. 6,331,983 in view of Hardjono, U.S. Pat. No. 6,643,773 and further in view of Francis et al (Hereafter, Francis), U.S. Pat. No. 5,331,637.

Regarding claim 1, Haggerty teaches a method for distributing packets or messages efficiently across a network of information processing units (= Mcast Hosts) and intermediate nodes (= Mcast Routers/Switches) (i.e., multicasting packets across switch/router networks) [see Figs. 2-5 and Abstract], the method on an information processing unit comprising the steps of:

receiving a message created and sent by a user, the user associating the message with a plurality of individual destinations (i.e., receiving multicast packet with destinations IP addresses of a multicast group) [see Col. 11, Line 60 to Col. 12, Line 15 and Col. 12, Line 55 to Col. 13, Line 12]; and

sending a single copy of the message, in a multicast packet, across the network via at least one intermediate nodes to the plurality of individual destinations corresponding to a plurality of individual destination network addresses (i.e., copying an incoming multicast packet onto each of its going tree links) [see Col. 6, Lines 12-22 and

Col. 13, Lines 36-45] and using a reliable multicast technique (i.e., reliable delivery of multicast packets/messages with acknowledgment) [see Col. 17, Lines 30-64].

Haggerty does not explicitly teach distributing electronic mail message across the network using multicast technique. However, Haggerty does suggest the use of multicasting in transmission of messages/packets over the Internet such as transmission of corporate messages to employees and video/audio conferencing [see Col. 7, Lines 5-20]. This implies that there are some forms of electronic messages involved in transmission/reception in the network.

Hardjono, in the same field of messages/packets multicasting endeavor, discloses multicasting technique is well-known in the art for transmitting data messages such as e-mail messages to selected groups of users across the network like the Internet [see Hadjono, Abstract and Col. 1, Lines 13-25]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate multicasting technique for e-mail messages, disclosed by Hadjono, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to allow more users to easily create and join multicasting sessions [see Hadjono, Col. 1, Lines 13-25]. Thus, it would offer cost savings in network resources since network processing and bandwidth are conserved by transmitting a single copy of messages/packets over a distribution tree that branches out to destinations across the network.

In addition, Haggerty does suggest the use of multicasting technique with unicast packets [see Haggerty, Col. 3, Line 51 to Col. 4, Line 31]. However, Haggerty does not

explicitly teach the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address and wherein the packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process.

Claims 3 and 6 are rejected under the same rationale set forth above to claim 1.

Regarding claim 8, Haggerty teaches a method for distributing packets or messages across a network of information processing units (= Mcast Hosts) and intermediate nodes (= Mcast Routers/Switches) (i.e., multicasting packets across

switch/router networks) [see Figs. 2-5 and Abstract], the method on an intermediate node comprising the steps of:

receiving a message in a multicast packet including a plurality of destination network addresses (i.e., receiving multicast packet with destinations IP addresses of a multicast group) [see Col. 11, Line 60 to Col. 12, Line 15 and Col. 12, Line 55 to Col. 13, Line 12];

determining one or more "next hops" corresponding to the plurality of destination network addresses for forwarding the packet (i.e., determining where the packet gets routed to next) [see Col. 12, Line 55 to Col. 13, Line 9];

replicating the packet for each "next hop" (i.e., messages or multicast packets are replicated when the tree branches) [see Col. 6, Lines 12-22]; and

forwarding one copy of the packet to each of the "next hops" (i.e., copying an incoming multicast packet onto each of its going tree links) [see Col. 6, Lines 12-22 and Col. 13, Lines 36-45].

Haggerty does not explicitly teach distributing electronic mail message across the network using multicast technique. However, Haggerty does suggest the use of multicasting in transmission of messages/packets over the Internet such as transmission of corporate messages to employees and video/audio conferencing [see Col. 7, Lines 5-20]. This implies that there are some forms of electronic messages involved in transmission/reception in the network.

Hardjono, in the same field of messages/packets multicasting endeavor, discloses multicasting technique is well-known in the art for transmitting data messages

such as e-mail messages to selected groups of users across the network like the Internet [see Hadjono, Abstract and Col. 1, Lines 13-25]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate multicasting technique for e-mail messages, disclosed by Hadjono, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to allow more users to easily create and join multicasting sessions [see Hadjono, Col. 1, Lines 13-25]. Thus, it would offer cost savings in network resources since network processing and bandwidth are conserved by transmitting a single copy of messages/packets over a distribution tree that branches out to destinations across the network.

In addition, Haggerty does suggest the use of multicasting technique with unicast packets [see Haggerty, Col. 3, Line 51 to Col. 4, Line 31]. However, Haggerty does not explicitly teach the multicast packet includes a packet header comprising a plurality of destination network addresses wherein at least one of the plurality of destination network addresses is a unicast address and wherein the packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It

would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process.

Regarding claim 10, Haggerty teaches the method as defined in claim 8 with all of the steps such as determining one or more "next hops" for forwarding the packet (i.e., determining where the packet gets routed to next) [see Col. 12, Line 55 to Col. 13, Line 9], replicating the packet for each "next hop" (i.e., messages or multicast packets are replicated when the tree branches) [see Col. 6, Lines 12-22], and forwarding one copy of the packet to each of the "next hops" (i.e., copying an incoming multicast packet onto each of its going tree links) [see Col. 6, Lines 12-22 and Col. 13, Lines 36-45]. In addition, Haggerty further teaches multicasting of different types of packets across the networks [see Col. 11, Lines 45-67 and Col. 12, Lines 30-31 and Figs. 4-5]. This suggests that multiple packets are processed and sent across the network from one hop to the next. Therefore, the determining, replicating and forwarding steps are repetitively executed for each newly received packet.

Regarding claim 13, Haggerty teaches a computer readable medium including instructions for distributing packets or messages efficiently across a network of

information processing units (= Mcast Hosts) and intermediate nodes (= Mcast Routers/Switches) (i.e., multicasting packets across switch/router networks) [see Figs. 2-5 and Abstract], the computer readable medium comprising instructions for:

receiving a message in a multicast packet including a plurality of individual destination network addresses (i.e., receiving multicast packet with destinations IP addresses of a multicast group) [see Col. 11, Line 60 to Col. 12, Line 15 and Col. 12, Line 55 to Col. 13, Line 12];

determining the "next hop" for each individual destination network address of the plurality of individual destination network addresses (i.e., determining where the packet gets routed to next) [see Col. 12, Line 55 to Col. 13, Line 9]; and

replicating the packet for each "next hop" (i.e., messages or multicast packets are replicated when the tree branches) [see Col. 6, Lines 12-22].

Haggerty does not explicitly teach distributing electronic mail message across the network using multicast technique. However, Haggerty does suggest the use of multicasting in transmission of messages/packets over the Internet such as transmission of corporate messages to employees and video/audio conferencing [see Col. 7, Lines 5-20]. This implies that there are some forms of electronic messages involved in transmission/reception in the network.

Hardjono, in the same field of messages/packets multicasting endeavor, discloses multicasting technique is well-known in the art for transmitting data messages such as e-mail messages to selected groups of users across the network like the Internet [see Hadjono, Abstract and Col. 1, Lines 13-25]. It would have been obvious to

one of ordinary skill in the art at the time of the invention was made to incorporate multicasting technique for e-mail messages, disclosed by Hadjono, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to allow more users to easily create and join multicasting sessions [see Hadjono, Col. 1, Lines 13-25]. Thus, it would offer cost savings in network resources since network processing and bandwidth are conserved by transmitting a single copy of messages/packets over a distribution tree that branches out to destinations across the network.

In addition, Haggerty does suggest the use of multicasting technique with unicast packets [see Haggerty, Col. 3, Line 51 to Col. 4, Line 31]. However, Haggerty does not explicitly teach the multicast packet includes a packet header comprising the plurality of destination network addresses wherein at least one of the plurality of destination network addresses is a unicast address and wherein the packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination

addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process.

Regarding claim 14, Haggerty further teaches the computer readable medium as defined in claim 13, further comprising the instruction for:

forwarding a copy of the packet to each "next hop" (i.e., copying an incoming multicast packet onto each of its going tree links) [see Col. 6, Lines 12-22 and Col. 13, Lines 36-45].

Regarding claim 15, Haggerty teaches the computer readable medium as defined in claim 14 with instructions for carrying out all of the steps such as receiving a packet containing address information for a list of destinations (i.e., receiving multicast packet with destination IP address of a multicast group) [see Col. 11, Line 60 to Col. 12, Line 15 and Col. 12, Line 55 to Col. 13, Line 12], determining the "next hop" for each of those destinations (i.e., determining where the packet gets routed to next) [see Col. 12, Line 55 to Col. 13, Line 9], and replicating the packet for each "next hop" (i.e., messages or multicast packets are replicated when the tree branches) [see Col. 6, Lines 12-22]. In addition, Haggerty further teaches multicasting of different types of packets across the networks [see Col. 11, Lines 45-67 and Col. 12, Lines 30-31 and Figs. 4-5]. This suggests that multiple packets are processed and sent across the

network from one hop to the next. Therefore, the determining, replicating and forwarding steps are repetitively executed for each newly received packet.

Regarding claim 17, Haggerty teaches an intermediate node for distributing packets or messages efficiently across a network of information processing units (= Mcast Hosts) and intermediate nodes (= Mcast Routers/Switches) (i.e., multicasting packets across switch/router networks) [see Figs. 2-5 and Abstract], the intermediate node comprising:

a reception unit for receiving a message in a multicast packet including a plurality of individual destination network addresses (i.e., receiving multicast packet with destinations IP addresses of a multicast group) [see Col. 11, Line 60 to Col. 12, Line 15 and Col. 12, Line 55 to Col. 13, Line 12];

a determination unit for determining the "next hop" for each individual destination network address of the plurality of individual destination network addresses (i.e., determining where the packet gets routed to next) [see Col. 12, Line 55 to Col. 13, Line 9]; and

a copying unit for replicating the packet for each of the "next hops" (i.e., messages or multicast packets are replicated when the tree branches) [see Col. 6, Lines 12-22].

Haggerty does not explicitly teach distributing electronic mail message across the network using multicast technique. However, Haggerty does suggest the use of multicasting in transmission of messages/packets over the Internet such as transmission of corporate messages to employees and video/audio conferencing [see

Col. 7, Lines 5-20]. This implies that there are some forms of electronic messages involved in transmission/reception in the network.

Hardjono, in the same field of messages/packets multicasting endeavor, discloses multicasting technique is well-known in the art for transmitting data messages such as e-mail messages to selected groups of users across the network like the Internet [see Hadjono, Abstract and Col. 1, Lines 13-25]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate multicasting technique for e-mail messages, disclosed by Hadjono, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to allow more users to easily create and join multicasting sessions [see Hadjono, Col. 1, Lines 13-25]. Thus, it would offer cost savings in network resources since network processing and bandwidth are conserved by transmitting a single copy of messages/packets over a distribution tree that branches out to destinations across the network.

In addition, Haggerty does suggest the use of multicasting technique with unicast packets [see Haggerty, Col. 3, Line 51 to Col. 4, Line 31]. However, Haggerty does not explicitly teach the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address and wherein the packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process.

Regarding claim 18, Haggerty further teaches the intermediate node as defined in claim 17, further comprising:

a forwarding unit for forwarding a copy of the packet to each of the "next hops" (i.e., copying an incoming multicast packet onto each of its going tree links) [see Col. 6, Lines 12-22 and Col. 13, Lines 36-45].

Regarding claim 19, Haggerty further teaches the intermediate node as defined in claim 18 such as a reception unit for receiving a packet containing address information for a plurality of destinations (i.e., receiving multicast packet with destination IP address of a multicast group) [see Col. 11, Line 60 to Col. 12, Line 15 and Col. 12,

Line 55 to Col. 13, Line 12], a determination unit for determining the "next hop" for each of the destinations (i.e., determining where the packet gets routed to next) [see Col. 12, Line 55 to Col. 13, Line 9], and a copying unit for replicating the packet for each of the "next hops" (i.e., messages or multicast packets are replicated when the tree branches) [see Col. 6, Lines 12-22]. In addition, Haggerty further teaches multicasting of different types of packets across the networks [see Col. 11, Lines 45-67 and Col. 12, Lines 30-31 and Figs. 4-5]. This suggests that multiple packets are processed and sent across the network from one hop to the next. Therefore, the determining, replicating and forwarding steps are repetitively executed for each newly received packet.

5. Claims 2, 4, 7, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haggerty et al (Hereafter, Haggerty), U.S. Pat. No. 6,331,983 in view of Hardjono, U.S. Pat. No. 6,643,773 and further in view of Francis et al (Hereafter, Francis), U.S. Pat. No. 5,331,637 and further in view of Shur et al (Hereafter, Shur), U.S. Pat. No. 6,259,701.

Regarding claim 2, Haggerty, Hardjono and Francis do not explicitly teach the method as defined in claim 1, wherein the reliable multicast technique comprises a reliable Small Group Multicast technique. However, Haggerty does suggest the use of the Internet Group Management Protocol (IGMP) for managing requests to join a multicast group(s) and receive multicast traffic [see Col. 3, Lines 21-29 and Col. 4, Lines 56-61].

Shur, in the same field of messages/packets multicasting endeavor, discloses the use of multicasting data transmission with Small Group scheme [see Shur, Col. 3, Lines 33-54 and Col. 8, Lines 16-26]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate small group multicast technique, disclosed by Shur, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to support data multicasting to a fairly small group of only a few parties and thus improve the scalability of large scale groups involving multicasting process.

Claims 4 and 7 are rejected under the same rationale set forth above to claim 2.

Regarding claim 9, Haggerty, Hardjono and Francis do not explicitly teach the method as defined in claim 8 wherein the determining, replicating and forwarding steps operate according to a Small Group Multicast scheme. However, Haggerty does suggest the use of the Internet Group Management Protocol (IGMP) for managing requests to join a multicast group(s) and receive multicast traffic [see Col. 3, Lines 21-29 and Col. 4, Lines 56-61].

Shur, in the same field of messages/packets multicasting endeavor, discloses the use of multicasting data transmission with Small Group scheme [see Shur, Col. 3, Lines 33-54 and Col. 8, Lines 16-26]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate small group multicast technique, disclosed by Shur, into the transmission of multicast messages/packets across the

network of information processing units and intermediate nodes disclosed by Haggerty, in order to support data multicasting to a fairly small group of only a few parties and thus improve the scalability of large scale groups involving multicasting process.

Regarding claim 12, Haggerty, Hardjono and Francis do not explicitly teach the method as defined in claim 8, wherein the multicast packet comprises a Small Group Multicast packet. However, Haggerty does suggest the use of the Internet Group Management Protocol (IGMP) for managing requests to join a multicast group(s) and receive multicast traffic [see Col. 3, Lines 21-29 and Col. 4, Lines 56-61].

Shur, in the same field of messages/packets multicasting endeavor, discloses the use of multicasting data transmission with Small Group scheme [see Shur, Col. 3, Lines 33-54 and Col. 8, Lines 16-26]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate small group multicast technique, disclosed by Shur, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to support data multicasting to a fairly small group of only a few parties and thus improve the scalability of large scale groups involving multicasting process. Therefore, the multicast packet comprises a small group multicast packet for supporting small group multicast scheme.

6. Claims 5, 11, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haggerty et al (Hereafter, Haggerty), U.S. Pat. No. 6,331,983 in view of Hardjono, U.S. Pat. No. 6,643,773 and further in view of Francis et al (Hereafter,

Francis), U.S. Pat. No. 6,862,279 and further in view of Provino et al (Hereafter, Provino), U.S. Pat. No. 6,269,085.

Regarding claim 5, Haggerty, Hardjono and Francis do not explicitly teach the information processing unit as defined in claim 3, wherein the transmission unit operates according to a communication protocol to process ACKs and NAKs as well as packet retransmissions. However, Hardjono does suggest the use of acknowledgments received from neighbor nodes [see Hardjono, Col. 17, Lines 39-54].

Provino, in the same field of messages/packets multicasting endeavor, discloses the use of multicasting data transmission with Acknowledgments (ACKs) and Negative Acknowledgments (NACKs) and retransmission of data packets [see Provino, Col. 1, Lines 10-21]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate processing ACK and /or NACK and performing packet retransmissions, disclosed by Provino, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to indicate whether data packets were correctly received or need to be retransmitted [see Provino, Col. 2, Lines 5-11]. Thus, it would offer a more reliable multicasting of packets/messages in the network.

Regarding claim 11, Haggerty, Hardjono and Imai do not explicitly teach the method as defined in claim 8, further comprising the steps of processing ACKs and/or NAKs and performing packet retransmissions. However, Hardjono does suggest the use

of acknowledgments received from neighbor nodes [see Hardjono, Col. 17, Lines 39-54].

Provino, in the same field of messages/packets multicasting endeavor, discloses the use of multicasting data transmission with Acknowledgments (ACKs) and Negative Acknowledgments (NACKs) and retransmission of data packets [see Provino, Col. 1, Lines 10-21]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate processing ACK and /or NACK and performing packet retransmissions, disclosed by Provino, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to indicate whether data packets were correctly received or need to be retransmitted [see Provino, Col. 2, Lines 5-11]. Thus, it would offer a more reliable multicasting of packets/messages in the network.

Regarding claim 16, Haggerty, Hardjono and Francis do not explicitly teach the computer readable medium as defined in claim 15, further comprising the instructions for processing ACKs and/or NAKs and handling packet retransmissions. However, Hardjono does suggest the use of acknowledgments received from neighbor nodes [see Hardjono, Col. 17, Lines 39-54].

Provino, in the same field of messages/packets multicasting endeavor, discloses the use of multicasting data transmission with Acknowledgments (ACKs) and Negative Acknowledgments (NACKs) and retransmission of data packets [see Provino, Col. 1, Lines 10-21]. It would have been obvious to one of ordinary skill in the art at the time of

the invention was made to incorporate processing ACK and /or NACK and performing packet retransmissions, disclosed by Provino, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to indicate whether data packets were correctly received or need to be retransmitted [see Provino, Col. 2, Lines 5-11]. Thus, it would offer a more reliable multicasting of packets/messages in the network.

Regarding claim 20, Haggerty, Hardjono and Francis do not explicitly teach the intermediate node as defined in claim 19, further comprising an acknowledge unit for processing ACKs and/or NAKs and a retransmit unit for handling packet retransmissions. However, Hardjono does suggest the use of acknowledgments received from neighbor nodes [see Hardjono, Col. 17, Lines 39-54].

Provino, in the same field of messages/packets multicasting endeavor, discloses the use of multicasting data transmission with Acknowledgments (ACKs) and Negative Acknowledgments (NACKs) and retransmission of data packets [see Provino, Col. 1, Lines 10-21]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate processing ACK and /or NACK and performing packet retransmissions, disclosed by Provino, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to indicate whether data packets were correctly received or need to be retransmitted [see Provino, Col. 2, Lines 5-11]. Thus, it would offer a more reliable multicasting of packets/messages in the network.

(10) Response to Argument

A. Introduction:

Haggerty et al, U.S. Pat. No. 6,331,983, Pub. Date of December 2001:

Haggerty et al discloses a method and apparatus for establishing connections in a switch-based communications network for multicast traffic. A source receives a multicast packet on an access port from a source host, determines a group address in the multicast packet, and composes and sends a "sender present" message to other switches on its network ports. The receiving switches determine whether a local host wishes to join the group and if so, send a map message back toward the source switch on a predetermined path between the receiving switch and the source switch. A map message may terminate at a switch on the path that already has a connection for this group/source pair, and join into this connection as an additional output port. In this manner, a "signal out, connect back" method is provided for establishing a connection path from the sender to **multiple receivers**. In addition, multicast traffic can be sent across a switch/router interface in either direction, providing for controlled multicast traffic between router-based networks and switch-based networks [see Haggerty, Abstract].

Hardjono, "U.S. Pat. No. 6,643,773," Pub. Date November 2003:

Hardjono discloses an apparatus and method, utilized by a receiving node in a multicast for authenticating a message received from a transmitting node, uses tags to

determine if the transmitting node is in the multicast. More particularly, a first tag received with the message is located and utilized to determine if the transmitting node is in the multicast. The first tag includes data associated with at least one of the receiving node and the transmitting node. A second tag then is generated if the transmitting node is determined to be in the multicast. Once generated, the second tag is transmitted with the message to a third node in the multicast. Among other things, the second tag includes data indicating that the receiving node is in the multicast [see Hardjono, Abstract].

In addition, Hardjono discloses multicasting is a well known method of transmitting messages to selected groups of users across a network, such as the Internet. One simple example of multicasting entails transmitting an E-mail message to a plurality of users that each are on a mailing list. Video conferencing and teleconferencing also use multicasting principles and thus, often are referred to as "multiconferencing." [see Hardjono, Col. 1, Lines 13-19].

Francis et al, "U.S. Pat. No. 5,331,637," Pub. Date July 1994:

Francis discloses a method for routing multicast packets in a network is disclosed. A node s101 wishing to join a particular multicast group transmits a packet via a sequence of nodes (r101, r102, r104, r107) including a core node r107 on the multicast tree corresponding to the particular multicast group which the node wishes to join. The packet contains a request to join the particular multicast group and the multicast address of the core node r107 of the multicast tree corresponding to the

particular multicast group. The packet is received at each node r101, r102, r104, r107 of the sequence of nodes. Each node r101, r102, r104, r107 which receives the packet writes an address of the node s101, r101, r102, r104 from which the packet was received in an entry of a multicast forwarding table maintained thereat which entry is indexed by the multicast address of the core node r107. If the node r101, r102, r 104 which received the packet is not on the multicast tree of the particular multicast group, the node r101, r102, r104 writes an address of the next node r102, r104, r107 of the sequence of nodes in the multicast forwarding table entry indexed by the multicast address of the core node r107. The packet is then retransmitted to the next node r102, r104, r107 of the sequence of nodes [see Francis, Abstract].

In addition, Francis discloses at least one of the plurality of individual destination network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48].

NOTE: Double Patenting Rejection has not been discussed in the Appeal Brief.

B. Sole Issue: Regarding 35 U.S.C. §103(a) rejection of claims 1, 3, 6, 8, 13 and 17, Pages 13-26 of the Appeal Brief is directed to these claims.

Appellant argued that neither Haggerty, Hardjono nor Francis references, taken either alone or in combination with one another, teach re suggest the claimed limitation.

Examiner respectfully disagrees. *In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.* See ***In re Keller*, 642F. 2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck* & Co., 800 F. 2d 1091, 231 USPQ 375 (Fed. Cir. 1986)**. Applicant obviously attacks references individually without taking into consideration based on the teaching of combinations of references as shown above.

Regarding claim 1, based on the broadest reasonable interpretation within the scope of the art, Haggerty teaches a method for distributing packets or messages efficiently across a network of information processing units and intermediate nodes such as Mcast Hosts and Mcast Routers/Switches. For example, Haggerty discloses multicasting packets across switch/router networks [see Haggerty, Figs. 2-5 and Abstract].

Haggerty further teaches receiving a message created and sent by a user, the user associating the message with a plurality of individual destinations. For example, Haggerty discloses receiving multicast packet with destinations IP addresses of a multicast group [see Haggerty, Abstract and Col. 11, Line 60 to Col. 12, Line 15 and Col. 12, Line 55 to Col. 13, Line 12]. **Of course, the packet (message) is associating with a plurality of individual destinations since there are multiple receivers or subscribers receiving multicast packet (message).**

In addition, Haggerty further teaches sending a single copy of the message, in a multicast packet, across the network via at least one intermediate node to the plurality of individual destinations corresponding to a plurality of individual destination network addresses. For example, Haggerty discloses copying an incoming multicast packet onto each of its going tree links [see Haggerty, Col. 6, Lines 12-22 and Col. 13, Lines 36-45] and using a reliable multicast technique such as providing reliable delivery of multicast packets/messages with acknowledgment [see Haggerty, Col. 17, Lines 30-64] wherein multicast packet to the plurality of individual destinations corresponding to a plurality of individual destination network addresses (destinations IP addresses of a multicast group) [see Haggerty, Fig. 6 and Abstract and Col. 11, Line 60 to Col. 12, Line 15 and Col. 12, Line 55 to Col. 13, Line 12]. **Again, the packet (message) is associating with a plurality of individual destinations since there are multiple receivers or subscribers (corresponding to a plurality of individual destination network addresses) receiving multicast packet (message) [see Haggerty, Fig. 6].**

Haggerty does not explicitly teach distributing electronic mail message across the network using multicast technique. However, Haggerty does suggest the use of multicasting in transmission of messages/packets over the Internet such as transmission of corporate messages to employees and video/audio conferencing [see Haggerty, Col. 7, Lines 5-20]. This implies that there are some forms of electronic messages involved in transmission/reception in the network.

Hardjono, in the same field of messages/packets multicasting endeavor, discloses multicasting technique is well-known in the art for transmitting data messages such as e-mail messages to selected groups of users across the network like the Internet [see Hadjono, Abstract and Col. 1, Lines 13-25].

Again, the packet (e-mail message) is associating with a plurality of individual destinations since there are multiple receivers or subscribers (corresponding to a plurality of users that each are on a mailing list) receiving multicast packet (e-mail message). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate multicasting technique for e-mail messages, disclosed by Hadjono, into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to allow more users to easily create and join multicasting sessions [see Hadjono, Col. 1, Lines 13-25]. Thus, it would offer cost savings in network resources since network processing and bandwidth are conserved by transmitting a single copy of messages/packets over a distribution tree that branches out to destinations across the network.

Moreover, Haggerty does suggest the use of multicasting technique with unicast packets [see Haggerty, Col. 3, Line 51 to Col. 4, Line 31]. However, Haggerty does not explicitly teach the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address and wherein the

packet/message is destined for reception at the destination corresponding to the unicast address as an ordinary unicast packet.

However, Francis, in the same field of multicast distribution of packets endeavor, discloses the multicast packet includes a packet header comprising the plurality of individual destination network addresses wherein at least one of the plurality of individual destination network addresses is a unicast address [see Francis, Col. 5, Line 40 to Col. 6, Line 54 and Col. 7, Line 38 to Col. 8, Line 33 and Col. 11, Lines 27-48]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of unicast address in the list of destination addresses disclosed by Francis into the transmission of multicast messages/packets across the network of information processing units and intermediate nodes disclosed by Haggerty, in order to branch packets to appropriate destination and thus saving time for packet distribution process.

In summary, the references can and should be combined in the manner noted in the Rejection shown above. Dependent claims 2, 4-5, 7, 9-12, 14-16 and 18-20 are rejected at least by virtue of their dependency on independent claims and by other reasons set forth above. Accordingly, claims 1-20 remain/stand rejected as shown above.

(11) Evident Appendix

(Empty)

(12) Related Proceeding Appendix

(None)

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

PHILIP TRAN
PRIMARY EXAMINER

AU 2155
June 21, 2007

Conferees

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER

KHANH DINH
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100